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001/003

Serial No. 10/763,955
60130-2008; 02MRA0227

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant: Thomas
Serial No.: 10/763,955
Filed: January 23, 2004
Group Art Unit: 3683
Examiner: Torres, Melanie
Title: DISC BRAKE PAD BACKPLATE ASSEMBLY

REPLY BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This is in reply to the Examiner's Answer mailed December 22, 2005. The Examiner's Answer raises arguments which require some brief response.

In the second paragraph on page 4 and bridging to page 5, the Examiner states it is unclear how the invention of Fischer differs from Applicant's claimed invention because they appear to be identical in both structure and function.

Answer:

Fischer does not disclose a disc brake pad backplate assembly including a pad spring having a first resilient leaf-spring like mode where end portions of the pad spring are unrestrained up to a predetermined limit and a second buckling mode where the end portions of the pad spring are restrained by circumferentially spaced abutments of a backplate above the predetermined limit.

The Examiner points to page 6, paragraph 2 and page 7, paragraph 2 of Fischer. These sections disclose the leaf spring 5 in an assembled state and a pre-assembled state. The pre-assembled leaf spring 5 is shown in broken lines in Figure 1. When the leaf spring 5 is assembled on a lining holder 1 by a holding bracket 7, the leaf spring 5 flattens, as shown in

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unbroken lines. Fischer describes the change of shape of the leaf spring 5 as the leaf spring 5 is assembled on the lining holder 1. However, this change in shape of the leaf spring 5 is not disclosed as causing ends 29 of the leaf spring 5 to be restrained as claimed.

The ends 29 of the pad spring 5 are chamfered and point upwardly such that the ends 29 lie at the change-over to clips 17 (page 8, third paragraph of the translation). When a middle part 15 of the leaf spring 5 deflects inwardly, the ends 29 of the leaf spring 5 slide over the clips 17. Therefore, there is no lateral restraint of the ends 29 of the leaf spring 5. Fischer does not disclose that the clips 17 laterally restrain the pad spring 5.

Additionally, Fischer also does not disclose that the leaf spring 5 has more than one spring rate. The leaf spring 5 only operates in a leaf spring-like mode, and the leaf spring 5 does not operate in a buckling mode as claimed.

Fischer also does not disclose a disc brake pad backplate assembly including a pad spring dimensioned relative to a distance between circumferentially spaced abutments of a backplate. Fischer does not disclose any relative dimensions of the leaf spring 5 relative to the clips 17 of the lining holder 1, and therefore the leaf spring 5 cannot be dimensioned relative to the distance between the clips 17.

The Examiner also states that the leaf spring 5 has recesses 21 that engage clips 19 in such a manner as to provide for sliding both without contact with the clips 19 and with contact with the clips 19, which would provide different spring rates. Fischer contains no disclosure that the geometry of the spring, the clips, and the lining holder would cause this to occur. The only disclosure in Fischer is of the laterally outermost edges of the recesses 21 being held by contact by the laterally outermost parts of the clips 19. As stated in the introduction to the present patent application, the spring 5 would contact the radial outer surface of the lining holder 1 before the recesses 21 abut the clips 19, so no buckling mode could occur. At a certain load, the spring 5 would move straight from a resilient mode to absolutely no resilience due to loads being transmitted from the holding bracket 7 straight through the spring 5 to the lining holder 1. However, even if the recesses 21 allow the leaf spring 5 to both contact and not contact the clips 19, this movement would not therefore cause the clips 17 of the lining holder 1 to restrain the ends 29 of the leaf spring 5 as claimed. That is, if movement of the leaf spring 5 causes the leaf spring 5 to contact the clips 19, this

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movement does not cause the clip 17 to restrain the ends 29 of the leaf spring 5 because the ends 29 would slide over the clips 17. The claimed invention is not anticipated by Fischer.

CLOSING

For the reasons set forth above, and for the reasons set forth in the main brief, the rejection must be reversed.

Respectfully Submitted,

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Dated: February 15, 2006

CERTIFICATE OF FACSIMILE

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, 571-273-8300 on February 15, 2006.



Amy M. Spaulding